DOCUMENT RESUME

ED 458 358 CE 081 279

AUTHOR Camp, William G.

TITLE A National Study of the Supply and Demand for Teachers of Agricultural Education in 1996-1998.

SPONS AGENCY Association for Career and Technical Education, Alexandria, VA. Agricultural Education Division.

PUB DATE 2000-01-10

NOTE 56p.; With contributions by Mendy Beckman. For the 1995 survey, see ED 424 405.

AVAILABLE FROM For full text: http://www.aged.vt.edu/pubs/s-d-98.pdf.

PUB TYPE Numerical/Quantitative Data (110) -- Reports - Research (143)

EDRS PRICE MF01/PC03 Plus Postage.

DESCRIPTORS *Agricultural Education; Beginning Teachers; Comparative Analysis; Educational Needs; Educational Supply; Employment Patterns; Ethnic Distribution; Females; Higher Education; Labor Needs; National Surveys; Needs Assessment; Public Schools; Racial Distribution; Secondary Education; Tables (Data); *Teacher Characteristics; *Teacher Education; Teacher Placement; *Teacher Qualifications; Teacher Shortage; *Teacher Supply and Demand; Trend Analysis; *Vocational Education Teachers; Womens Education

ABSTRACT

A census of the field of public school agricultural education was conducted to characterize the supply and demand for teachers of agricultural education in 1996-1998 nationally, regionally, and by state. Data were collected through surveys mailed to the head teacher educators in each agricultural education department with a program for specific preparation of teachers of agriculture at institutions of higher education in the United States and to the individuals in charge of agricultural education at each state department of education. The following were among the main findings: (1) the profession has remained stable and is growing slowly in terms of numbers of teaching positions; (2) although teacher education programs are qualifying adequate numbers of potential new teachers, a de facto shortage of agricultural education teachers still exists; (3) improvements are needed in systems for advising potential new teachers about available teaching positions; (4) despite progress in the area of diversity, efforts are still needed to increase the representation of women and ethnic minorities in the profession; and (5) major efforts are needed to expand the capability of teacher education programs to prepare teachers of agriculture. (Sixteen tables/figures are included. The bibliography lists 16 references. A news release and fact sheet are appended.) (MN)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 458 358

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

W. G. Camp

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

A National Study of the Supply and Demand for Teachers of Agricultural Education in 1996-1998

William G. Camp
Agricultural and Extension Education
College of Agriculture and Life Sciences
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061-0343

With Contributions by
Mendy Beckman

An ongoing study sanctioned and sponsored by the Agricultural Education Division of the Association for Career and Technical Education since 1965

January 2000

CE 081 279

BEST COPY AVAILABLE

Table of Contents

Table of Contents ii
List of Tables iii
List of Figures iii
Importance of the Study 1
Background 1
Problem and Purpose 3
Data Collection 4
Regional and National Summary Data 4
- Numbers of Teachers 4
- Personnel Turbulence 7
- Graduates and Placements 7
- Types of Teaching Positions 10

State and Regional Data 11
- Programs of Agricultural Education 11
- Sources of New Teachers 11
- Teacher Education Completers and Placements 11
- Program Structure 11
- Race/Ethnicity and Gender of Newly Qualified Potential Teachers 12
- Race/Ethnicity and Gender of Teachers of Agricultural Education 13

Faculty Numbers and Affiliation 30
Conclusions 30
- Stability 30
- Potential Teachers 31
- Teacher Shortage 31
- Sources of New Teachers 32
- Placement Rate 32
- Diversity 32
- Program Structure 33
- Teacher Education 33

Recommendations 33
References 33
News Release 35
Fact Sheet 36

List of Tables

Table 1 Trends in Selected Information on theSupply of Secondary Teachers of Agricultural Education in 1964-65 and Since 1977 ---- 5

Table 2 Overview of Agricultural Education Teaching Positions and Personnel Turbulence in the United States for Selected Years ---- 7

Table 3 Numbers of Newly Qualified Potential Agricultural Education Teachers and Placement ---- 8

Table 4 Numbers Newly Qualified to Teach Agricultural Education Entering Various Occupations ---- 9

Table 5 Types of Secondary Teaching Positions in Agricultural Education on September 1, 1998 ---- 10

Table 6 Programs of Agricultural Education and Their Primary Program Focus by State and Region[A] ---- 14

Table 7 Sources of Agricultural Education Teachers Hired for Beginning of School Year 1998, by State and Region ---- 16

Table 8 Newly Qualified Potential teachers of Agricultural Education and Their Job Placement on September 1, 1998, by Institution and Region ---- 18

Table 9 Types of Secondary Teaching Positions (FTE) in Agricultural Education on September 1, 1998, by Region and State ---- 21

Table 10 Race and Ethnicity of Newly Qualified Potential Teachers of Agricultural Education on Sept 1, 1998, by Region and Institution ---- 23

Table 11 Agricultural Education Teacher (FTE) Gender and Race/Ethnicity, by Region and State, September 1, 1998 ---- 27

Table 12 Agricultural Education Faculty and Colleges of Affiliation[A] in Fall 1998 and 1993 ---- 30

List of Figures

Figure 1 Trend in Number of Agricultural Education Teaching Positions, 1965-1998 ---- 5

Figure 2 Trend in Total Newly Qualified Potential Teachers of Agricultural Education, 1977-1998 ---- 6

Figure 3 Placement Patterns of Newly Qualified Potential Teachers of Agricultural Education in 1998 ---- 9

Figure 4 Sources of New Hires for Agricultural Education positions in the united States, 1998 ---- 12

A National Study of the Supply and Demand for Teachers of Agricultural Education in 1996-1998

This is the 32nd volume and the 34th year of the national survey of the supply and demand for teachers of Agricultural Education in the United States. The study is sanctioned by the Agricultural Education Division of the Association for Career and Technical Education and is conducted as a service to the profession. Dr. Ralph Woodin, initially of the Ohio State University and later of the University of Tennessee, Knoxville, conducted the annual studies from 1965 until 1973. Dr. David Craig of the University of Tennessee continued the study from 1974 through 1984. Beginning with 1985, I have been responsible for the annual study except for 1990 and 1991 when Dr. J. Dale Oliver, also of Virginia Tech conducted it. The 1995 study was the last annual study. At the 1994 annual convention, the Agricultural Education Division elected to change the study to a 3-year cycle and the current volume (1996-1998) is the first triennial study. This report provides trend data in a number of tables that are drawn from Dr. Woodin's, Dr. Craig's, Dr. Oliver's, and my own reports for the respective years. The layouts of many of the tables, data regarding previous years, much of the instrumentation, and parts of the verbiage are taken directly from those earlier studies and I make no claim to the originality of any parts of the study. On close reading of this study, you will undoubtedly find errors in the tables.

I accept full responsibility for any data inconsistencies. Ms. Beckman and I have worked to minimize the occurrence of errors but recognize fully that mistakes will have slipped by our review and I apologize in advance for those errors that may relate to your state or your teacher education program. I also accept

Respectfully,

William D Camp

January 10, 2000

Importance of the Study

The enterprise of public education in America is constantly evolving. It often seems totally resistant to management, or even accurate description, as Goodlad (1984) found. Of more immediate concern to the audience of this report, Agricultural Education is in the midst of what may well be radical changes in organization as well as in curriculum (National Research Council, 1988). Not only is the profession changing rapidly, but the patterns by which new teachers are educated and brought into the profession are undergoing dramatic revisions in most states (Lynch, 1991, 1996). According to the National Center for Education Statistics, "Between 1996 and 2008, the number of classroom teachers in elementary and secondary schools is projected to rise, primarily due to the increase in school enrollment during this period" (Gerald, 1999). Thus, it is as important as ever that data be available to illuminate the numbers and sources of new teachers in Agricultural Education. Moreover, it is important that data be available to track the changes as they are implemented in Agricultural Education programs throughout America.

Background

The profession's concern for the supply and demand for teachers of Agricultural Education is not a new phenomenon. In a bulletin published by the Department of the Interior, C. D. Jarvis (1921) reported a total of 283 graduates from specialized teacher preparation programs in Agricultural Education, for 38 colleges of agriculture in the United States. He went on to quote C. H. Lane of the Federal Board for Vocational Education:

> In the north Atlantic region 352 students were enrolled in resident teacher-training classes during the school year 1919-20, as against 247 for the previous year. In the southern territory 849 students were enrolled in 1919-20 compared with 389 for the previous year. The east-central region had an enrollment of 343 for 1919-20 as against 282 for the previous year. In the west-central region, for 1919-20, 491 students were enrolled as against 164 for the previous year. In the Pacific-coast region, 275 students were enrolled in 1919-20 compared with 252 for the previous year.
>
> In summarizing the enrollment in resident teacher-training classes it is found that there were 2,310 students enrolled during 1919-20, compared with 1,334 for 1918-19. Experience has shown that many students who work in these classes do not become teachers. Furthermore, these enrollments represent the number of students of all years, and many of them will not be immediately available for service. In 1920, 444 students who had carried the work in agricultural education were graduated. (p. 9)

Estimating the supply and demand of teachers is a difficult and often frustrating task. Many people have tried over the years, and the results have been mixed at best. As recently as 1992, an Office of Educational Research and Improvement study (National Center for Educational Statistics, 1992) estimated the number of Agricultural Education teachers in the United states in 1987-88 at 10,598 yet included only teachers of grades 9-12. The annual supply and demand study reported the total number of teachers at 11,072 for the same year. In light of such discrepancies, there has often been some debate over the reality of an agriculture teacher shortage. Parmley, Bowen, & Warmbrod (1979) examined data from previous national supply and demand studies by Woodin and Craig, attempting to make sense of a confusing situation. They concluded that the shortage reported by the ongoing studies resulted not from a shortfall in the number of graduates but from the low percentage of graduates choosing teaching as their initial profession. By extending their reasoning, the classic laws of supply and demand from the field of economics implied that the shortage was a function of salaries for beginning teachers rather than an inadequate numbers of graduates. More recently, Brown (1995) concluded:

> Approximately half of those graduating with a bachelor's degree in agricultural education were electing not to enter the teaching profession. The problem was not created by insufficient numbers completing bachelor's degrees in agricultural education. The problem was created by insufficient recruitment of qualified individuals into the profession of teaching. (p. 11)

Regardless of the theoretical basis for the teacher shortage, a very real problem faced the profession of Agricultural Education in those years: how to recruit enough people into teaching to fill the need of the profession for replacement teachers. The "teacher shortage" became a constant problem for Agricultural Education. Then, between 1976 and 1988, student enrollment in public school Agricultural Education declined from 697,000 to 522,000 (Scanlon, Yoder, Hoover, & Johnson, 1989). That student decline occurred during a concurrent but much less

dramatic decline in the number of teachers in the profession, from 12,844 in 1978 to 11,204 in 1987, as reported later in this study. During the same general timeframe, the number of newly qualified potential teachers of agriculture fell from 1,749 in 1977 to 643 in 1994, again reported later in this study. Many of the positions becoming vacant during that timeframe were not being filled because of the decreasing number of teaching positions. Thus, even with fewer new potential teachers available, not only did the placement rate for new teacher education graduates decline, but the shortage of the 1960s and 1970s became a very brief teacher surplus in the mid-1980s. Notably, the decline in the number of newly qualified teachers of agriculture continued throughout the 1980s, in spite of the general increase in teacher education enrollments during that period, as reported by Rodman (1987).

More recently, in a Michigan State University study, Scheetz and Slade (1993) found a "good demand" for Agricultural Education teachers, both in Michigan and nationally. Nicholas (1991) found that the balance between supply and demand for teachers of Agricultural Education varied widely by region. She noted a slight surplus of teachers in the south-central states and a slight shortage in the middle-Atlantic states and in the northwestern states.

Shapiro (1993) reported on the changes that could be expected in teacher preparation with the development of national standards for teacher certification by the National Board for Professional Teaching Standards. Her contention was that by setting higher standards for teachers, and by improving the conditions under which they will teach, the profession should be able to attract more and better-qualified teachers. Olson (1993) contended that an increasing number of highly skilled, technically competent vocational teachers might have to be recruited from industry. In the case of Agricultural Education, that might be interpreted as agri-business or farming.

Today another potential major problem may loom on the horizon. Dykman (1993), drawing heavily from earlier work by Lynch (1991) asked the question, "who will teach the teachers" for vocational education. The Lynch study pointed out that the numbers of vocational teacher education programs has been steadily declining in recent years. At the same time, federal policies have begun to place greater emphasis on vocational education as a critical component of the public educational system. If the future holds more vocational education (Dykman, 1993), including a revitalized Agricultural Education (National Research Council, 1988), more teachers will be needed, not fewer. Yet teacher education programs seem to be on the decline in vocational education in general (Lynch, 1997). Does the same contradiction hold true in Agricultural Education?

Problem and Purpose

The problem addressed by this ongoing study is twofold. Leaders of the profession need current, accurate estimates of the numbers of and demand for teachers of Agricultural Education to provide for meaningful policy decisions at all levels. Teacher organizations and teacher educators need current, accurate supply and demand information to use in recruitment activities and in counseling potential teachers of Agricultural Education. Yet, detailed data of that nature, specific to Agricultural Education, are not available outside this study.

The purpose of the study was to conduct a census of the field of public school Agricultural Education to determine the situation regarding the supply and demand of teachers in the United States, beginning after the previous study (1995) through the end of school year 1997-98. Specific questions to be addressed were:

1. What are the current numbers and trends in terms of total numbers of teachers of Agricultural Education?
2. What kinds of public school programs exist for Agricultural Education?
3. What are the numbers and trends in newly qualified potential teachers of Agricultural Education?
4. What are the numbers and trends in teacher education programs?

Data Collection

This study was a population census. The data came from two sources.

Supply Data -- e.g., teacher education programs, graduates, and placements. The head teacher educator in each Agricultural Education department with a program for the specific preparation of teachers of agriculture at institutions of higher education in the United States was surveyed. In several institutions, the head teacher educator regularly passes responsibility for the study to another faculty member.

Demand Data -- e.g., numbers of teachers, numbers of replacements hired, sources of replacements hired, types of schools, and kinds of programs. The person in charge of Agricultural Education at each state department of education was surveyed. In several states, the state department official does not have access to the data needed or for some other reason does not respond to the survey. In those states the survey was mailed to the head teacher educator at the relevant teacher education institution.

The initial surveys along with a cover letter and a return envelope were mailed in mid September 1998. Repeated follow-ups by mail, e-mail, telephone, and in person resulted in usable responses for almost all states and institutions. The last data were not collected until fall 1999. For those institutions and states that did not respond, previous-year data were used from the 1995 study.

Regional and National Summary Data

This study will provide two perspectives on the data collected. National and regional data will be presented in this section, followed by state and local data next. Throughout the report, the American Association for Agricultural Education (AAAE) regions were used to organize the data, by region. In that structure the regions and their states are:

Central: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin;

Eastern: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia;

Southern: Alabama, Arkansas, Florida, Georgia, Kentucky, Mississippi, North Carolina, Oklahoma, South Carolina, Texas, Tennessee, Virginia;

Western: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Numbers of Teachers

During the 35-year life of this study, the number of teachers of Agricultural Education in the United States has fluctuated greatly, ranging between a low of 9,981 in 1992 and a high of 12,844 in 1978, see Table 1 and Figure 1. From a different perspective, the net change

between 1965 and 1998 was +328, or only about a 3 percent increase. The most striking trend is a slow, but almost steady increase in the total number of Agricultural Education teaching positions in the United States from 9,981 in 1992 to a current high of 10,706 in 1998.

Table 1
Trends in Selected Information on the Supply of Secondary Teachers of Agricultural Education in 1964-65 and Since 1977

Year	Total number of positions on Sept. 1	Teachers needed but unavailable Sept. 1	Number newly qualified to teach during previous SY	Percent of newly qualified entering teaching
1965	10,378	120	1,038	64.6
1977	12,694	221	1,749	60.8
1978	12,844	189	1,791	56.7
1979	12,772	144	1,656	54.9
1980	12,510	117	1,584	52.0
1981	12,450	98	1,468	52.2
1982	12,474	35	1,368	51.3
1983	12,099	42	1,277	45.6
1984	11,960	19	1,249	45.2
1985	11,687	8	1,207	40.8
1986	11,582	20	964	41.2
1987	11,204	14	952	41.6
1988	11,072	39	838	42.5
1989	10,840	25	588	52.9
1990	10,356	23	625	53.0
1991	10,176	9	638	50.9
1992	9,981	11	686	53.4
1993	10,118	20	636	54.2
1994	10,234	40	643	56.3
1995	10,164	51	625	60.2
1996	10,297	NC	716	NC
1997	10,532	NC	657	NC
1998	10,706	69.5	748	63.8

NC - Data not collected for that year

The number of newly qualified potential teachers has not fared as well as the total number of teachers. In school year 1964-65, Agricultural Education programs produced 1,038 newly qualified potential teachers. That number reached a high of 1,791 in 1978 and a low of 588 in 1989. Since 1989, the number of newly qualified, potential teachers has increased somewhat ranging from 625 in 1995 to 748 in 1998. The proportion of newly qualified potential teachers entering teaching has historically ranged around half, ranging from a low of 40.8% in 1985 to a high of 64.6% in 1965. The placement rate in 1995 was 60.2%.

Figure 1. Trend in Total Agricultural Education Teaching Positions, 1965-1998

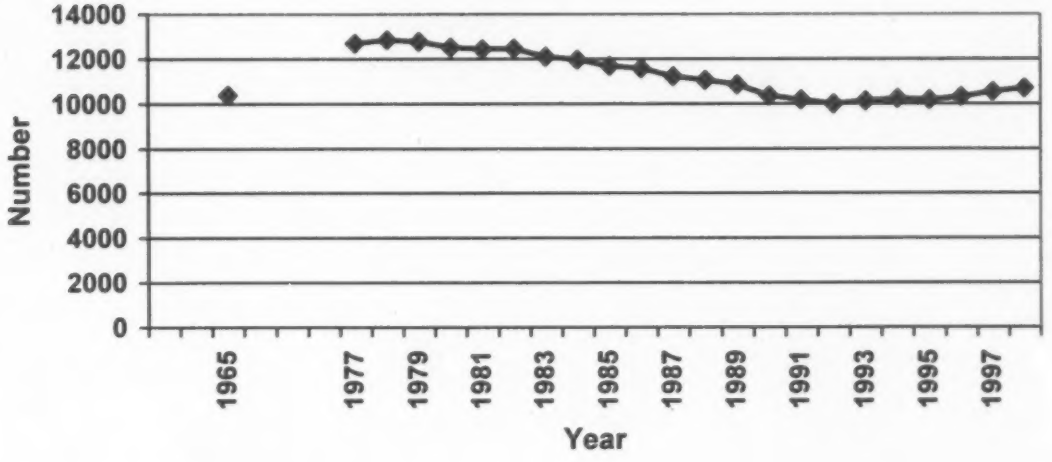
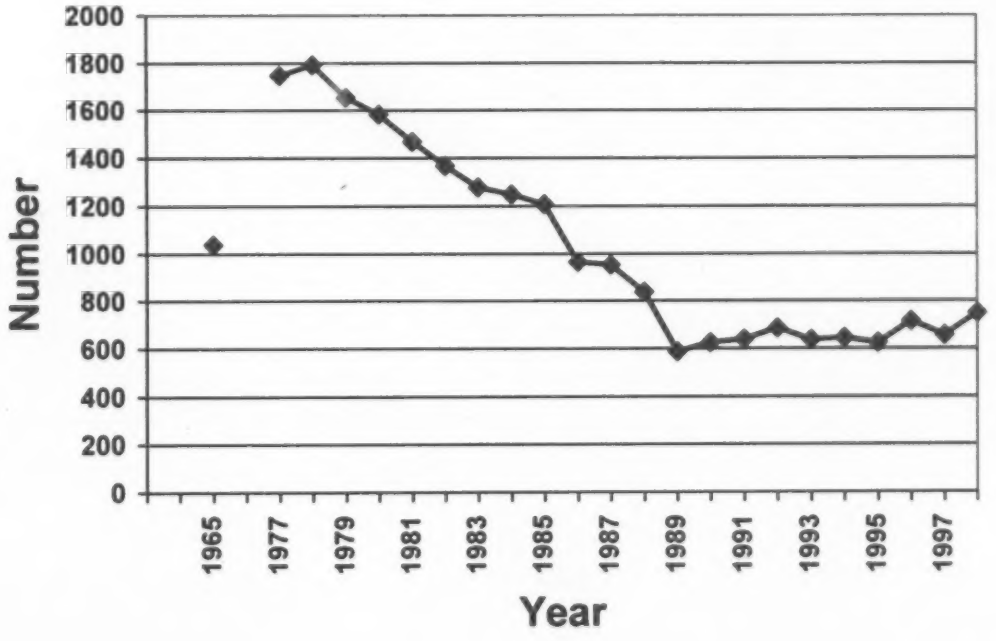


Figure 2. Trend in Total Newly Qualified Potential Teachers of Agricultural Education, 1977-1998



Personnel Turbulence

Table 2 repeats some of the data in Table 1, but adds several dimensions for comparison. An interesting set of statistics involves the net number of replacement teachers needed in the agricultural education classrooms. The total of new hires ranged from 1,273 in 1975 to 824 in 1980, with 888.9 (FTE new hires in 1998. That figure can be misleading, however, since many of those are simply moving from one school to another. The net number of replacement teachers needed could not be computed from earlier studies because data on school-to-school transfers were not collected. Since 1985, those numbers have been available and the net number of replacements needed has fallen fairly steadily from 805 in that year to 574.9 in 1998. New hires (n=888.9) represented 8.3 per cent of the total number of teachers (n=10,706) in 1998. Correcting for teachers moving between schools, the net replacement need (n=574.9) for the profession was only 5.3 percent in 1998. Comparing that to the general turnover rate in all of education (National Center for Education Statistics, 1992), it appears that teachers in agricultural education are considerably more stable than teachers in other disciplines.

The number of teachers needed but still unavailable at the start of the school year was 117 in 1980 but was down to 69.5 (FTE) in 1998. Comparing 1980 and 1998, the number of teachers working with various forms of temporary certification fell from 454 to 176 but the number of departments expected not to operate for the year was steady at 55 for that 18-year span.

Table 2
Overview of Agricultural Education Teaching Positions and Personnel Turbulence in the United States for Selected Years

	1975	1980	1985	1990	1995	1998
Total positions on Sept. 1	12,107	12,510	11,687	10,355.5	10,164	10,706
Teachers hired	1,273	824	1,043	979	977	888.9
Moving between schools	NC	NC	238	351	280	314
Net demand for replacements	NC	NC	805	628	697	574.9
Needed, not available Sept. 1	211	117	8	23	40	69.5
Teachers with temp. cert.	607	454	140	110	119	175.5
Departments that will not operate due to lack of qualified teacher	78	55	3	9	41	55

NC Data not collected for year indicated
Net change computed by subtracting total from current year from previous year total

Graduates and Placements

As we saw in Table 1 and Figure 2, the total number of new potential teachers of Agricultural Education qualified annually, declined steadily from 1980 to 1989, stabilized for about a decade in the range of the mid-600s, and increased slightly since the mid-1990s to 756 in 1998. An examination of Table 3 shows that, of 756 persons newly qualified to teach during school year 1998. That net placement rate of 63.8 % is somewhat higher (see Table 1) than historical results from previous editions of this study. When the placement rate is computed based on the number of newly qualified teachers whom their professors rated as "probably wanted to teach," (n = 619), the effective placement rate was 77.9%, which is considerably higher than in previous years. Assuming the estimate of those who "probably wanted to teach" is reasonably accurate, just over 22 % of newly qualified teachers were still unable to secure satisfactory teaching positions.

From the standpoint of agricultural teacher education, an important consideration in interpreting Table 3 is the change in perspective between 1975 and the present. As late as the 1985 supply and demand study, the survey sought simply the number of Agricultural Education BS/BA graduates. Until that time, being an Agricultural Education graduate was generally considered equivalent to being qualified to teach. That is no longer the case. Since 1985 the survey has sought the number of newly qualified potential teachers, which includes only part of the undergraduate program completers but also includes many masters degree or non-degree program completers.

Table 3
Newly Qualified Potential Agricultural Education Teachers and Placement

	1974-75	1989-90	1994-95	1995-96	1996-97	1997-98
Total Newly Qualified	1,660	625	625	716	657	748
Probably Wanted To Teach	NC	386	351	NC	NC	619
Of Newly Qualified, Number Entering Teaching	999	331	56.2	NC	NC	482
Percentage of Newly Qualified	60.2	53.0	484	NC	NC	63.8
Percentage who "Probably Wanted to Teach" [A]	NC	85.8	72.5	NC	NC	77.9

NC Data not collected for year indicated
A Number based on estimates by head teacher educator's at the reporting institutions

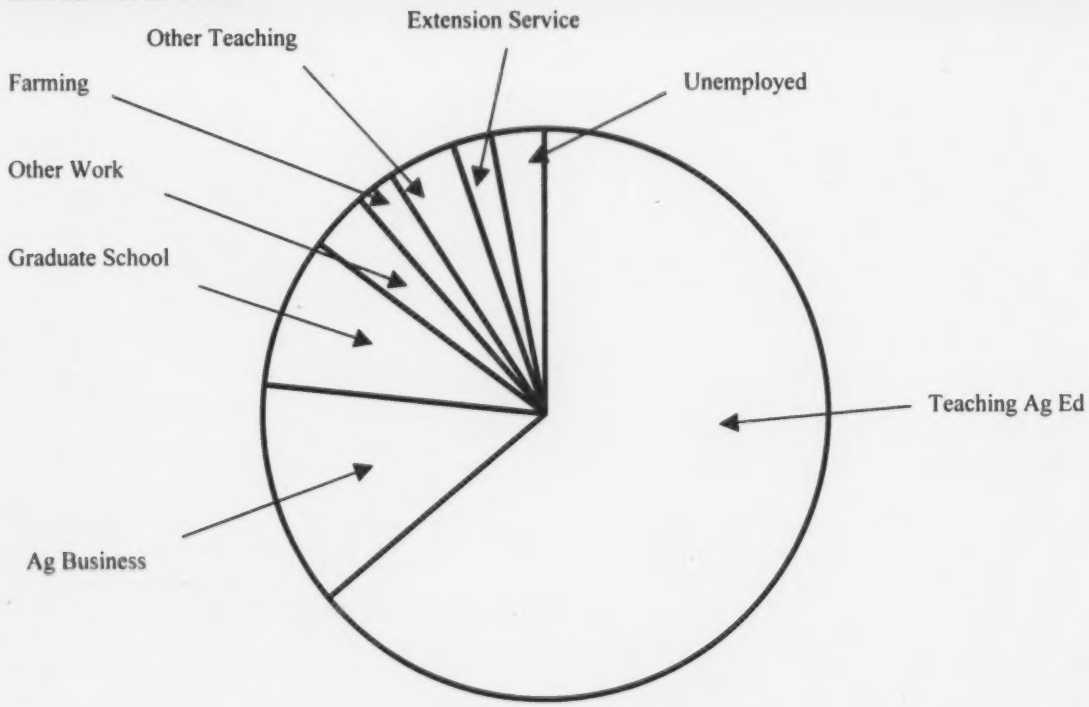
Table 4 provides information concerning the placement of those persons newly qualified to teach Agricultural Education. The primary initial occupation for teacher education program, regardless of their specific program remains teaching agriculture, with employment in agribusiness second. Full time farming has declined markedly over the past 20 years, from 136 in 1975 to 15 in 1995. Figure 3 provides a graphic illustration of the placement of this group in 1998.

Table 4
Newly Qualified to Teach Agricultural Education Entering Various Occupations

	1974-75	1989-90	1997-98
Newly Qualified	1,660	625	756
Teaching Ag Ed	999	295	482
Ag Business	125	157	96
Graduate Work	163	109	65
Other Work	164	61	25
Farming	136	46	15
Other Teaching	55	19	30
Armed Forces	18	3	*
Extension Service	NC	29	18
Unemployed	NC		22

NC Data not collected for year indicated
* Placement in the armed forces is now included in Other Work

Figure 3. Placement Patterns of Newly Qualified Potential Teachers of Agricultural Education in 1998



Types of Teaching Positions

Table 5 changes focus from teacher education program completers to teaching positions. As of fall term 1998, the Southern region of AAAE included almost half (46 %) of all Agricultural Education programs in the country, with the Eastern region having just under 10 percent of the programs. High school programs represented the clear majority (76%) of programs with middle school/junior high school programs making up only about 4 percent of all programs. Full-time adult and/or Young Framer programs made up just less than 2 percent of the programs. In marked contrast to earlier years, production agriculture programs made up only about 13 percent of programs, with a "combination" program representing over 27 percent of all programs.

Table 5
Types of Secondary Teaching Positions in Agricultural Education on September 1, 1998

	Central	Eastern	Southern	Western	US Total
TOTAL POSITIONS	2,962	1,050	4,912	1,782	10,706
GRADE LEVEL:					
Teaching high school only	2,215	857	3,392	1,625	8,089
Teaching junior high or middle school only	14	10	322	86	432
Combination high school and jr high/middle sch	345	46	506	63	960
Adult and/or Young Farmer only	57	13	95	34	199
ADULT EDUCATION:					
Some adult and/or Young Farmer responsibilities	237	97	1,024	68	1,426
MULTIPLE SCHOOLS:					
Teachers teaching in more than one school	69	20	315	49	453
DEPARTMENT SIZE:					
Single teacher dept.	1607	388	2,087	774	4,856
Multi teacher dept.	468	662	2,097	1,018	4,245
PROGRAM FOCUS:					
Ag Sales & Service	217	1	82	46	346
Agricultural Mechanics	80	41	695	133	949
Agricultural Products	6	0	52	0	58
Agriscience	430	63	260	241	994
Comb of Ag Courses	1,448	111	969	353	2,891
Disadv/Handicapped	0	6	45	0	51
Explore/Intro Ag	7	10	464	289	770
Natural Resources	68	38	102	50	258
Ornamental Horticulture	206	134	560	179	1079
Part Time Ag	28	4	2	6	40
Production Agriculture	330	47	546	456	1,379

State and Regional Data

Programs of Agricultural Education

Table 6 provides region and state-specific data on Agricultural Education programs, organized by AAAE region. Southern Region had the largest number of programs (n=4,912). Central was second with 2,962. The largest state program, Texas continued its domination of the field with 1,590 teaching positions, or almost 15 percent of all positions in the United States. California was second largest with 663 programs followed by Ohio with 559. Alaska was the smallest with only 8 positions. Of interest, and not shown in the tables, Texas reported 1,490 positions in 1995 and Alaska reported 7 in 1995, so both the smallest state and the largest, in terms of Agricultural Education programs reported gains in the number of teaching positions reported over the past three years. Table 6 also provides data sorted by program/option for each state. By far the largest program offering (n= 3,108) is a combination of Agricultural Education courses, rather than a dedicated program of agricultural production or any other single option. In terms of single-focus programs, ornamental horticulture (n=1,379) was second largest and production agriculture (n=1,079) was third.

Sources of New Teachers

Table 7 provides detailed data regarding the sources of new teachers in 1995, for each state. A total of 888.9 (FTE) teachers were hired in 1998, of whom 314 had simply moved from one school to another. As one might expect, the largest number of hires, was in the Southern region (n=306) with the smallest number (n=62.9) in the Eastern region. Alaska had no new hires and Texas had 150. The contribution to new hires of new master's degree graduates in Agricultural Education was surprisingly low (n=32). As in previous years, the number of new hires was substantially bolstered by previous Agricultural Education graduates (n=63) and former Agricultural Education teachers (n=115) returning to teaching.

Figure 3 illustrates the relative importance of the various sources of new hires for agricultural education in 1998.

Teacher Education Completers and Placements

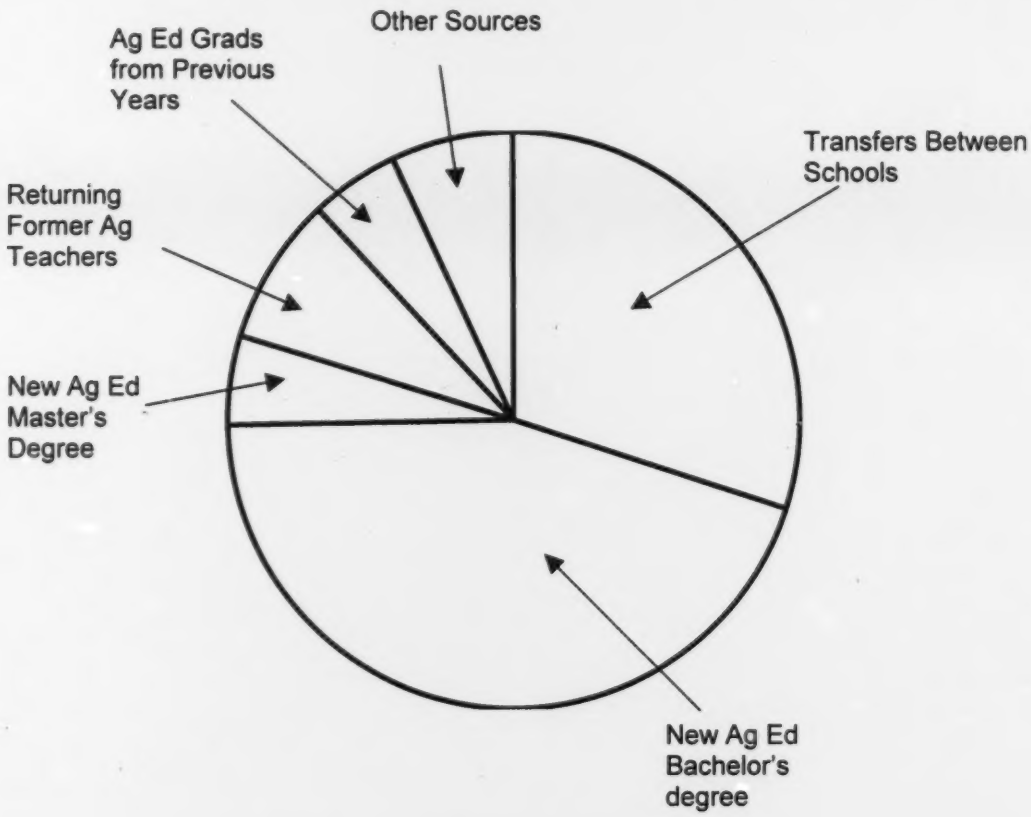
An examination of Table 8 shows the numbers of newly qualified graduates, by institution and by region, as well as their placement. As reported in Table 3, a total of 748 newly qualified potential agricultural education teachers were educated from all sources in 1998. Central region institutions produced 212 newly qualified teachers in 1998, with the largest number (n=24) coming from The University of Wisconsin-Platteville with the same number coming from the Ohio State University. A total of 43 teachers were prepared by Eastern Region institutions, with 14 coming from the Pennsylvania State University. In the Southern region, from a total of 350 newly qualified potential teachers, Texas Tech reported 38, Tarleton State University reported 36, and Texas A & M at College Station reported 35. Indeed, the eight teacher education institutions in Texas accounted for 160 newly qualified potential teachers, or over 45 percent of the Southern Region's total or over 21 per cent of all the teachers prepared in the country. In the Western region, California State University, San Luis Obispo produced 26 of the region's 143 newly qualified potential teachers.

Program Structure

Table 9 provides data by region and by state of the program structure of Agricultural Education in the United States in 1998. Clearly the dominant pattern for program level remains that of the high school (n=7866.8 FTE). In 15 states, high school was the only level for which agricultural

education programs were reported: Iowa, South Dakota, Connecticut, Michigan, Ohio, Massachusetts, New Hampshire, New Jersey, Vermont, Oklahoma, California, Colorado, Nevada, Oregon, and Tennessee. Only 199 purely Adult/Young Farmer programs remain but 1,431 teachers with at least some Adult/Young Farmer responsibilities were reported. Personnel in single-teacher departments (n=4,856) and in multi-teacher departments (n=4,245) were about equal in numbers. Teachers assigned to multiple schools numbered 453 and teachers with responsibilities for both high school and junior high/middle school classes numbered another 697.

Figure 4
Sources of New Hires for Agricultural Education positions in the united States, 1998


Other Sources
Ag Ed Grads from Previous Years
Transfers Between Schools
Returning Former Ag Teachers
New Ag Ed Master's Degree
New Ag Ed Bachelor's degree

Race/Ethnicity and Gender of Newly Qualified Potential Teachers

Table 10 shows the race/ethnicity and gender of newly qualified potential teachers of agricultural education by region and by institution. Data on race/ethnicity and gender of newly qualified teachers have been collected only since 1994. The numbers in this table are slightly lower than those reported earlier. Males represented the majority (n=432) of newly qualified teachers in 1998, as did white, non-Hispanic (n=687). California State University, Pomona

produced the only newly qualified potential teacher of Asian or Pacific island descent in 1998. Only five institutions, Oregon State, Washington State, Oklahoma State, Michigan State, and Auburn University produced new potential teachers on Native American descent. A total of 17 African-Americans and 22 Hispanic potential teachers were prepared nationally in 1998.

Race/Ethnicity and Gender of Teachers of Agricultural Education

Table 11 shows the race/ethnicity and gender of active teachers of agricultural education by region and by state. The current study represents the first time data have been reported on gender and race/ethnicity for practicing teachers although similar data have been collected regarding newly qualified potential teachers for several years. The numbers in this table are lower than the totals reported earlier because a number of states chose not to report data for this set of questions. For the teachers reported, males (n=6,452.9 FTE) outnumbered females (n=1,211.9 FTE) over 5 to 1. White, non-Hispanic teachers represented 94.9 percent of all teachers reported, with African-Americans a distant second at 2.1 per cent, Hispanics at 1.85 per cent, and Native Americans at only 0.2 per cent.

Table 6

Programs of Agricultural Education and Their Primary Program Focus by State and Region[A]

REGION STATE	Total Programs	Comb of Ag Courses	Orn Hort	Production Ag	Agri-Science	Explor Intro Ag	Ag Mech	Nat Res Mgt	Ag Sales & Service	Ag Products	Disad & Hand	Ag & Other Subj
CENTRAL												
Illinois	364	224	51	0	37	7	13	0	3	0	0	11
Indiana	238	214	12	0	0	0	2	0	0	0	0	10
Iowa	238	0	2	94	0	0	6	6	130	0	0	0
Kansas	175	172	1	0	0	0	2	0	0	0	0	0
Michigan	137	0	33	0	102	0	0	2	0	0	0	0
Minnesota	232											
Missouri	388	350	18	0	5	0	7	6	1	1	0	0
Nebraska	128											
North Dakota	88	59	1	0	21	0	0	0	0	0	0	7
Ohio	559	18	88	236	265	0	50	50	83	5	0	0
South Dakota	86	82	0	0	0	0	0	4	0	0	0	0
Wisconsin	329	329	0	0	0	0	0	0	0	0	0	0
Subtotals	2,962	1,448	206	330	430	7	80	68	217	6	0	28
EASTERN												
Connecticut	83	8	18	18	0	0	17	0	0	0	0	0
Delaware	39.5	17	12	0	0	1	2	1.5	0	0	0	0
Maine	27	0	5	6	7	0	0	9	0	0	0	0
Maryland	74											
Massachusetts	96	6	45	19	4	0	11	7	0	0	2	2
New Hampshire	30.5	7.5	10		3	2	1	2	0	0	2	1
New Jersey	74	14	34	2	21	0	0	4	0	0	0	0
New York	232											
Pennsylvania	260											
Rhode Island	5.8	5.8	0	0	0	0	0	0	0	0	0	0
Vermont	31	6	5	1	0	2	5	11	0	0	0	1
West Virginia	97	47	5	0	28	5	5	4	1	0	2	0
Subtotals	1,050	111	134	47	63	10	41	38.5	1	0	6	4

REGION STATE	Total Pro-grams	Comb of Ag Courses	Orn Hort	Produc-tion Ag	Agri-Sci-ence	Explor Intro Ag	Ag Mech	Nat Res Mgt	Ag Sales & Service	Ag Prod-ducts	Disad & Hand	Ag & Other Subj
SOUTHERN												
Alabama	362	3	0	0	10	2	0	0	0	0	0	0
Arkansas	273	270	2	0	0	0	0	1	0	0	0	0
Florida	425	170	75	0	40	100	0	10	0	0	10	0
Georgia	303	0	105	0	61	0	83	0	12	0	0	0
Kentucky	274	110	45	59	4	4	12	10	3	0	0	0
Louisiana*	227	227	0	0	0	0	0	0	0	0	0	0
Mississippi	198	22	10	85	52	0	29	0	0	0	0	0
North Carolina	365	165	100	50	0	0	50	0	0	0	0	0
Oklahoma	429	0	6	0	0	0	0	0	0	0	4	0
South Carolina	110	60	19	10	5	0	5	10	0	0	1	0
Texas	1,590	67	163	311	50	331	493	53	47	52	23	0
Virginia	303	102	35	31	38	27	23	18	20	0	7	2
Tennessee	280											
Subtotals	4,912	1,196	560	546	260	464	695	102	82	52	45	2
WESTERN												
Alaska	8	0	0	0	0	0	0	8	0	0	0	0
Arizona	93	0	0	0	88	0	0	0	0	0	0	5
California	663	0	80	119	0	285	119	20	40	0	0	0
Colorado	106	95	9	0	0	0	0	2	0	0	0	0
Hawaii	28			0	0	0					0	0
Idaho	97	86	5	0	0	1	0	5	0	0	0	0
Montana	81	0	2	78	0	0	0	0	0	0	0	0
Nevada	25	22	1	0	0	0	2	0	0	0	0	0
New Mexico	92	28	7	32	9	3	7	0	6	0	0	0
Oregon	127	122	5	0	0	0	0	0	0	0	0	0
Utah	93	0	10	66	12	0	5	0	0	0	0	0
Washington	317	0	60	110	132	0	0	15	0	0	0	0
Wyoming	52	0	0	51	0	0	0	0	0	0	0	1
Subtotals	1,782	353	179	456	241	289	133	50	46	0	0	6
US TOTALS	**10,706**	**3,108**	**1,079**	**1,379**	**994**	**770**	**949**	**258.5**	**304**	**58**	**51**	**40**

A Column subtotals will not equal overall total because some states did not report categorical data

Table 7

Sources of Agricultural Education Teachers Hired for Beginning of School Year 1998, by State and Region

REGION STATE	Total Hired	Moved Schools	New Ag Ed BS/BA	New Ag Ed MS/MA	Other Ag Col New Grads	Other Ed Col New Grads	Other Col New Grads	Previous Ag Ed Grads	Former Ag Teacher	Agri-Business	Farming	Non-Degree	Unknown
CENTRAL													
Illinois	39	8	19	0	0	0	0	0	2	0	0	0	0
Indiana	24	12	11	0	0	0	0	0	0	0	1	0	0
Iowa	29	7	15	0	0	0	0	0	5	0	0	0	2
Kansas	23	6	11	0	0	0	0	0	4	2	0	0	0
Michigan	28	6	8	0	4	1	0	2	1	2	2	2	0
Minnesota	34	10	11	0	0	0	0	6	3	3	0	0	1
Missouri	58	20	29	0	0	0	0	0	6	0	0	0	0
Nebraska	13	3	7	0	0	0	0	2	1	0	0	0	0
North Dakota	10	2	2	0	0	0	0	3	2	0	0	0	1
Ohio	0	0	0	0	0	0	0	0	0	0	0	0	0
South Dakota	0	2	5	0	0	0	0	2	1	0	0	0	0
Wisconsin	39	7	23	1	0	0	0	0	2	2	2	0	3
Subtotals	297	83	141	1	4	1	0	15	27	9	5	2	7
EASTERN													
Connecticut	1	1	0	0	0	0	0	1	0	0	0	0	0
Delaware	6.5	1	1	0	0	0	0	0	1	0	0	0	3.5
Maine	1	0	1	0	0	0	0	0	0	0	0	0	0
Maryland	0	1	3	0	2	0	0	1	0	0	0	1	0
Massachusetts	8	0	2	0	0	2	0	1	1	1	0	0	1
New Hampshire	1.5	1	0	0	0	0.5	0	0	0	0	0	0	0
New Jersey	14.5	2	1	0	0	0	0	1	1	0	0	0	9.5
New York	8	0	1	0	0	0	0	0	0	0	0	0	0
Pennsylvania	9	4	5	0	0	0	0	0	0	0	0	0	0
Rhode Island	0.4	0	0.4	0	0	0	0	0	0	0	0	0	0
Vermont	2	2	0	0	0	0	0	0	0	0	0	0	0
West Virginia	11	5	2	0	0	0	0	4	0	0	0	0	0
Subtotals	62.9	17	16.4	0	2	2.5	0	8	3	1	0	1	14

REGION STATE	Total Hired	Moved Schools	New Ag Ed BS/ BA	New Ag Ed MS/ MA	Other Ag Col New Grads	Other Ed Col New Grads	Other Col New Grads	Previous Ag Ed Grads	Former Ag Teacher	Agri-Business	Farming	Non-Degree	Unknown
SOUTHERN													
Alabama	14	20	15	5	0	0	0	0	4	0	0	0	0
Arkansas	36	14	16	0	0	0	0	3	1	1	1	0	0
Florida	0	0	9	0	0	0	0	2	0	0	0	0	0
Georgia	42	22	14	3	0	0	0	0	0	2	1	0	0
Kentucky	20	0	17	1	0	0	0	2	0	0	0	0	0
Louisiana [A]	24	5	9	0	0	0	0	7	2	0	0	0	1
Mississippi	0	3	2	0	0	0	0	0	0	0	0	0	0
North Carolina	31	7	12	4	6	0	0	0	2	0	0	0	0
Oklahoma	0	44	25	0	0	0	0	0	0	0	0	0	0
South Carolina	9	4	0	1	2	1	0	0	1	0	0	0	0
Texas	77	0	68	7	0	0	0	0	0	0	0	2	0
Virginia	27	7	4	6	3	0	0	2	3	2	0	0	0
Tennessee	26	2	22	0	0	0	0	1	1	0	0	0	0
Subtotals	306	128	213	27	11	1	0	17	14	5	2	2	1
WESTERN													
Alaska	1	1	0	0	0	0	0	0	0	0	0	0	0
Arizona	19	4	6	1	0	0	0	3	4	0	0	0	1
California	94	38	36	14	4	0	0	2	0	0	0	0	0
Colorado	31	15	6	0	0	1	0	3	3	2	0	1	0
Hawaii	0	0	0	0	0	0	0	0	0	0	0	0	0
Idaho	15	3	9	0	0	0	0	3	0	0	0	0	0
Montana	0	4	4	0	0	0	0	0	1	0	0	0	4
Nevada	3	0	2	0	0	0	0	0	0	1	0	0	0
New Mexico	21	4	6	5	0	0	1	0	11	1	1	0	1
Oregon	0	1	1	5	0	0	0	0	21	1	0	0	0
Utah	11	1	5	0	1	0	0	2	0	0	0	0	2
Washington	24	12	18	0	0	0	0	0	1	0	0	0	0
Wyoming	4	3	2	0	0	0	0	0	1	1	1	0	0
Subtotals	223	86	95	25	5	1	1	13	42	6	2	1	8
US TOTALS	**888.9**	**314**	**465.4**	**53**	**22**	**5.5**	**1**	**53**	**86**	**21**	**9**	**6**	**30**

A Data not provided. Figures shown are from 1995 study.

Table 8
Newly Qualified Potential teachers of Agricultural Education and Their Job Placement on September 1, 1998, by Institution and Region

REGION STATE	Institution	Newly Qual-ified	Teach Ag, In State	Teach Ag Out of State	Teach Other Subj	Work in Ag Bus	Exten-sion Svc.	Farm Full Time	Grad Sch	Other Work	Unem-ployed	Un-known
CENTRAL												
Illinois	Illinois State University	8	4	0	1	2	0	1	0	0	0	0
Illinois	Southern Illinois University	8	5	0	0	2	0	0	1	0	0	0
Illinois	University of Illinois	13	4	2	1	3	1	0	1	0	0	1
Illinois	Western Illinois University	4	2	0	0	1	0	0	1	0	0	0
Indiana	Purdue University	17	10	0	2	1	0	0	2	1	0	1
Iowa	Iowa State University	18	7	0	0	11	0	0	0	0	0	0
Kansas	Kansas State University	10	5	0	0	0	2	0	3	0	0	0
Michigan	Michigan State University	10	10	0	0	0	0	0	0	0	0	0
Minnesota	Univ. of Minnesota- St. Paul	10	7	0	0	0	0	0	2	1	0	0
Missouri	Northwest Missouri State	6	2	3	0	0	0	0	0	0	1	0
Missouri	Southwest Missouri State	12	24	2	0	4	0	0	0	0	0	0
Missouri	University of Missouri	15	12	0	0	0	0	0	0	0	3	0
Nebraska	University of Nebraska	7	4	0	0	0	0	0	0	1	0	2
N. Dakota	North Dakota State University	8	3	0	0	1	0	0	0	0	0	4
Ohio	Ohio State University	24	10	2	0	6	0	0	6	0	0	0
S. Dakota	South Dakota State University	10	4	2	0	1	0	0	1	2	0	0
Wisconsin	U. of Wisconsin, Madison	3	2	0	0	0	0	0	0	0	0	1
Wisconsin	U. of Wisconsin, Platteville	5	4	0	0	0	0	1	0	0	0	0
Wisconsin	U. of Wisconsin, River Falls	24	18	2	0	2	1	1	0	0	0	0
Subtotals		212	137	13	4	34	4	3	17	5	4	9
EASTERN												
Connecticut	University of Connecticut	0	0	0	0	0	0	0	0	0	0	0
Delaware	Delaware State	0	0	0	0	0	0	0	0	0	0	0
Maryland	U. of Maryland- Eastern Shore	1	1	0	0	0	0	0	0	0	0	0
Mass.	U. of Massachusetts	4	3	1	0	0	0	0	0	0	0	0
New Hampshire	University of New Hampshire	3	1	1	0	0	1	0	0	0	0	0

REGION STATE	Institution	Newly Qual-ified	Teach Ag, In State	Teach Ag Out of State	Teach Other Subj	Work in Ag Bus	Exten-sion Svc.	Farm Full Time	Grad Sch	Other Work	Unem-ployed	Un-known
New Jersey	Rutgers Univ. - Cook College	1	0	0	0	0	0	0	0	0	1	0
New York	Cornell University	7	2	2	0	0	2	0	0	0	0	1
New York	St. U. of New York- Oswego	4	0	0	0	0	0	0	0	0	0	0
Pennsylvania	Penn State University	14	6	2	1	3	0	0	0	1	1	0
Rhode Island	U/ of Rhode Island	2	2	0	0	0	0	0	0	0	0	0
West Virginia	West Virginia University	7	4	0	0	0	0	1	1	1	0	0
Subtotals		43	19	6	1	3	3	1	1	2	2	1
SOUTHERN												
Alabama	Auburn University	12	10	1	0	1	0	0	0	0	0	0
Arkansas	Arkansas State University	4	4	0	0	0	0	0	0	0	0	0
Arkansas	Southern Arkansas	4	3	0	0	0	0	1	0	0	0	0
Arkansas	U. of Arkansas- Fayetteville	3	2	0	1	0	0	0	0	0	0	0
Florida	University of Florida	10	5	1	0	1	0	0	2	1	0	0
Georgia	Fort Valley State	1	1	0	0	0	0	0	0	0	1	0
Georgia	University of Georgia	13	12	1	0	0	0	0	0	0	0	0
Kentucky	Murray State University	5	0	1	0	3	0	0	1	0	0	0
Kentucky	University of Kentucky	13	4	1	0	3	0	0	4	0	0	1
Kentucky	Western Kentucky University	11	3	2	2	1	1	2	0	0	0	0
Louisiana	Louisiana State University	2	1	0	0	0	0	0	1	0	0	0
Louisiana	Louisiana Tech University	3	3	0	0	0	0	0	0	0	0	0
Louisiana	Southern U. and A&M	2	0	0	0	0	0	0	2	0	0	0
Louisiana	U. of Southwest Louisiana	2	1	0	0	1	0	0	0	0	0	0
Mississippi	Alcorn State University	1	1	0	0	0	0	0	0	0	0	0
Mississippi	Mississippi State University	6	2	1	0	2	1	0	0	0	0	0
N. Carolina	North Carolina State University	14	6	1	0	3	0	0	3	1	0	0
Oklahoma	Oklahoma State University	34	15	7	0	1	0	0	1	2	8	0
S. Carolina	Clemson University	1	1	0	0	0	0	0	0	0	0	0
Tennessee	Middle Tennessee State	10	5	0	1	4	0	0	0	0	0	0
Tennessee	Tennessee State U., Nashville	0	0	0	0	0	0	0	0	0	0	0
Tennessee	Tennessee Tech	4	2	0	0	1	0	0	0	1	0	0
Tennessee	U. of Tennessee- Knoxville	13	5	1	1	2	1	0	1	1	1	0

REGION STATE	Institution	Newly Qual-ified	Teach Ag, In State	Teach Ag Out of State	Teach Other Subj	Work in Ag Bus	Exten-sion Svc.	Farm Full Time	Grad Sch	Other Work	Unem-ployed	Un-known
Tennessee	U. of Tennessee- Martin	3	1	0	0	0	0	0	0	2	0	0
Texas	Sam Houston State	21	16	1	0	2	0	0	2	0	0	0
Texas	Southwest Texas State Univ.	6	2	0	0	1	0	0	0	3	0	0
Texas	Stephen F. Austin St. Univ.	7	5	0	0	0	0	0	2	0	0	0
Texas	Tarleton State	36	24	1	1	5	0	1	3	1	0	0
Texas	Texas A&M, College Station	35	16	0	2	8	2	0	4	3	0	0
Texas	Texas A&M, Commerce	3	2	0	0	0	0	0	0	0	0	1
Texas	Texas A&M, Kingsville	14	3	0	4	0	0	0	0	0	1	6
Texas	Texas Tech	38	7	3	3	7	2	3	7	1	2	3
Virginia	Virginia Tech	19	11	0	0	2	0	0	6	0	0	0
Subtotals		350	173	22	15	48	7	7	39	16	13	11
WESTERN												
Arizona	University of Arizona	12	8	0	2	0	1	0	1	0	0	0
California	California State U., Chico	0	9	0	1	1	0	0	0	0	1	0
California	California State U., Fresno	8	8	0	0	0	0	0	0	0	0	0
California	California State U., Pomona	5	5	0	0	0	0	0	0	0	0	0
California	Cal. State U., San Luis Obispo	26	22	0	4	0	0	0	0	0	0	0
California	U. of California, Davis	6	5	0	0	1	0	0	0	0	0	0
Colorado	Colorado State University	5	3	0	1	0	0	0	1	0	0	0
Idaho	University of Idaho	8	4	2	0	1	0	0	1	0	0	0
Montana	Montana State University	10	1	2	0	2	2	1	0	2	0	0
Nevada	University of Nevada, Reno	1	1	0	0	0	0	0	0	0	0	0
New Mexico	New Mexico State university	13	4	0	2	2	1	0	2	0	1	1
Oregon	Oregon State University	7	6	1	0	0	0	0	0	0	0	0
Utah	Utah State University	19	5	5	0	3	0	3	1	0	1	1
Washington	Washing ton State	16	12	1	0	0	0	0	1	0	0	0
Wyoming	University of Wyoming	7	0	5	0	0	0	0	1	0	0	1
Subtotals		143	93	16	10	10	4	4	8	2	3	3
US TOTAL		**748**	**422**	**57**	**30**	**95**	**18**	**15**	**65**	**25**	**22**	**24**

Table 9

Types of Secondary Teaching Positions (FTE) in Agricultural Education on September 1, 1998, by Region and State

REGION STATE	High School	Jr Hi/ Mid Sch	HS/JHS /MS	Adult /YF	School Unknown	Some Adult/YF	Multiple Sch	Single Teacher	Multi Teacher	Voc. School
CENTRAL										
Illinois	362	2	0	0	0	18	1	346	18	364
Indiana	87	8	143	0	0	42	3	153	85	12
Iowa	238	0	0	0	0	20	11	212	26	0
Kansas	165	0	6	0	0	12	1	147	28	0
Michigan	137	0	0	0	0	2	1	110	27	37
Minnesota	230	0	2	0	0	0	9	156	76	12
Missouri	356	4	0	28	0	125	10	207	180	100
Nebraska	0	0	130	0	0	15	4	122	8	0
North Dakota	24	0	64	0	0	1	5	72	16	3
Ohio	530	0	0	29	0	0	0	0	0	237
South Dakota	86	0	0	0	0	2	1	82	4	2
Wisconsin	0	0	0	0	0	0	23	0	0	0
Subtotals	2,215	14	345	57	0	237	69	1,607	468	767
EASTERN										
Connecticut	83	0	0	0	0	1	0	2	81	0
Delaware	37.5	1	1	0	0	0	0	10	29.5	3
Maine	25	0	0	0	0	0	2	19	8	4
Maryland	72	2	0	0	0	5	0	15	59	11
Massachusetts	96	0	0	0	0	0	0	14	82	78
New Hampshire	30.5	0	0	0	0	2	0	10	20.5	0
New Jersey	74	0	0	0	0	0	0	35	39	35
New York	92	0	40	0	0	0	2	119	113	75
Pennsylvania	245	3	0	12	0	41	3	108	152	37
Rhode Island	4.8	0	1	0	0	0	0	1	4.8	0
Vermont	9	0	0	0	22	0	0	6	25	22
West Virginia	88	4	4	1	0	48	13	49	48	23
Subtotals	856.8	10	46	13	22	97	20	388	662	288
SOUTHERN										
Alabama	10	5	0	0	0	0	2	13	2	13
Arkansas	0	0	273	0	0	0	0	242	28	3
Florida	60	100	50	15	0	15	0	200	225	15
Georgia	203	23	0	52	0	285	3	0	0	0

REGION STATE	High School	Jr Hi/ Mid Sch	HS/JHS /MS	Adult /YF	School Unknown	Some Adult/YF	Multiple Sch	Single Teacher	Multi Teacher	Voc. School
Kentucky	243	2	2	27	0	90	2	96	178	6
Louisiana[A]	207	10	10	0	0	5	0	0	0	0
Mississippi	184	4	10	0	0	3	5	122	76	41
North Carolina	320	45	0	0	0	0	4	195	125	0
Oklahoma	429	0	0	0	0	429	0	36	65	0
South Carolina	107	2	1	0	0	80	1	104	6	20
Texas	1,352	74	164	0	0	0	286	518	1072	0
Virginia	204	67	6	1	0	121	10	131	172	25
Tennessee	280	0	0	0	0	1	2	100	148	6
Subtotals	3,170	332	243	95	0	1,029	315	2,087	2,097	129
WESTERN										
Alaska	7	1	0	0	0	0	0	8	0	1
Arizona	92	1	0	0	0	0	4	53	40	0
California	663	0	0	0	0	10	6	128	535	663
Colorado	106	0	0	0	0	39	0	75	31	14
Hawaii	20	1	7	0	0	0	0	27	1	0
Idaho	96	1	0	0	0	0	1	60	37	1
Montana	81	0	0	0	0	0	1	16	65	3
Nevada	25	0	0	0	0	0	0	15	10	2
New Mexico	56	6	30	0	0	0	0	54	48	0
Oregon	127	0	0	26	0	0	0	104	23	4
Utah	80	1	4	8	0	5	8	78	15	2
Washington	224	75	18	0	0	0	25	113	204	3
Wyoming	48	0	4	0	0	14	4	43	9	1
Subtotals	1625	86	63	34	0	68	49	774	1018	694
US TOTALS	7,866.8	442	697	199	96	1,431	453	4,856	4,245	1,878

A Figures for Louisiana are from 1995.

Table 10
Race and Ethnicity of Newly Qualified Potential Teachers of Agricultural Education on Sept 1, 1998, by Region and Institution

REGION / STATE	INSTITUTION	Newly Qualified		African American		White, Non-Hispanic		Native American		Hispanic		Asian Pacific	
		M	F	M	F	M	F	M	F	M	F	M	F
CENTRAL													
Illinois	Illinois State University	4	4	0	0	4	4	0	0	0	0	0	0
Illinois	Southern Illinois University	6	2	0	0	6	2	0	0	0	0	0	0
Illinois	University of Illinois	3	10	0	0	3	10	0	0	0	0	0	0
Illinois	Western Illinois University	1	3	0	0	1	3	0	0	0	0	0	0
Indiana	Purdue University	5	12	0	0	5	12	0	0	0	0	0	0
Iowa	Iowa State University	9	9	0	0	9	9	0	0	0	0	0	0
Kansas	Kansas State University	3	7	0	0	3	7	0	0	0	0	0	0
Michigan	Michigan State University	5	5	0	0	4	4	1	0	0	1	0	0
Minnesota	Univ. of Minnesota- St. Paul	5	5	0	0	5	5	0	0	0	0	0	0
Missouri	Northwest Missouri State	5	1	0	0	5	1	0	0	0	0	0	0
Missouri	Southwest Missouri State	4	8	0	0	4	8	0	0	0	0	0	0
Missouri	University of Missouri	9	6	0	0	9	6	0	0	0	0	0	0
Nebraska	University of Nebraska	5	2	5	2	0	0	0	0	0	0	0	0
North Dakota	North Dakota State University	6	2	0	0	6	2	0	0	0	0	0	0
Ohio	Ohio State university	16	8	0	1	15	7	0	0	1	0	0	0
South Dakota	South Dakota State University	8	2	0	0	8	2	0	0	0	0	0	0
Wisconsin	U. of Wisconsin, Madison	3	0	0	0	3	0	0	0	0	0	0	0
Wisconsin	U. of Wisconsin, Platteville	3	2	0	0	3	2	0	0	0	0	0	0
Wisconsin	U. of Wisconsin, River Falls	12	12	0	0	12	12	0	0	0	0	0	0
Subtotals		112	100	5	3	105	96	1	0	1	1	0	0

REGION / STATE	INSTITUTION	Newly Qualified		African American		White, Non-Hispanic		Native American		Hispanic		Asian Pacific	
		M	F	M	F	M	F	M	F	M	F	M	F
Connecticut	University of Connecticut	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	Delaware State	0	0	0	0	0	0	0	0	0	0	0	0
Maryland	U. of Maryland- Eastern Shore	0	1	0	0	0	1	0	0	0	0	0	0
Massachusetts	University of Massachusetts	3	1	0	0	3	1	0	0	0	0	0	0
N. Hampshire	University of New Hampshire	0	3	0	0	0	3	0	0	0	0	0	0
New Jersey	Rutgers Univ. - Cook College	0	1	0	0	0	1	0	0	0	0	0	0
New York	Cornell University	1	6	0	0	1	6	0	0	0	0	0	0
New York	St. U. of New York, Oswego	2	2	0	0	2	2	0	0	0	0	0	0
Pennsylvania	Penn State University	7	7	0	1	7	6	0	0	0	0	0	0
Rhode Island	U. of Rhode Island	1	1	0	0	1	1	0	0	0	0	0	0
West Virginia	West Virginia University	4	3	0	0	4	3	0	0	0	0	0	0
Subtotals		18	25	0	1	18	24	0	0	0	0	0	0
SOUTHERN													
Alabama	Auburn U.	12	0	0	0	11	0	1	0	0	0	0	0
Arkansas	Arkansas State U.	4	0	0	0	4	0	0	0	0	0	0	0
Arkansas	Southern Arkansas	3	1	0	0	3	1	0	0	0	0	0	0
Arkansas	U. of Arkansas-Fayetteville	2	1	0	0	2	1	0	0	0	0	0	0
Florida	U. of Florida	1	9	0	1	1	8	0	0	0	0	0	0
Georgia	Fort Valley State College	1	1	0	1	1	0	0	0	0	0	0	0
Georgia	U. of Georgia	8	5	0	0	8	5	0	0	0	0	0	0
Kentucky	Murray State U.	3	2	0	0	3	2	0	0	0	0	0	0
Kentucky	U. of Kentucky	9	4	0	0	9	4	0	0	0	0	0	0
Kentucky	Western Kentucky U.	7	4	0	0	7	4	0	0	0	0	0	0
Louisiana	Louisiana State U.	1	1	0	0	1	1	0	0	0	0	0	0
Louisiana	Louisiana Tech U.	1	2	1	0	0	2	0	0	0	0	0	0
Louisiana	Southern U.	0	2	0	2	0	0	0	0	0	0	0	0
Louisiana	University of SW Louisiana	2	0	0	0	2	0	0	0	0	0	0	0
Mississippi	Alcorn State U.	1	0	1	0	0	0	0	0	0	0	0	0

REGION / STATE	INSTITUTION	Newly Qualified		African American		White, Non-Hispanic		Native American		Hispanic		Asian Pacific	
		M	F	M	F	M	F	M	F	M	F	M	F
Mississippi	Mississippi State U.	6	0	0	0	6	0	0	0	0	0	0	0
N. Carolina	North Carolina State U.	11	3	0	0	11	3	0	0	0	0	0	0
Oklahoma	Oklahoma State U.	25	2	0	0	22	2	3	0	0	0	0	0
S. Carolina	Clemson U.	1	0	0	0	1	0	0	0	0	0	0	0
Tennessee	Middle Tennessee State	4	6	0	0	4	6	0	0	0	0	0	0
Tennessee	Tennessee State U.	0	0	0	0	0	0	0	0	0	0	0	0
Tennessee	Tennessee Tech U.	4	0	0	0	4	0	0	0	0	0	0	0
Tennessee	U. of Tennessee-Knoxville	9	4	0	0	9	4	0	0	0	0	0	0
Tennessee	U. of Tennessee-Martin	3	0	0	0	3	0	0	0	0	0	0	0
Texas	Sam Houston State U.	12	8	0	0	12	7	0	0	0	1	0	0
Texas	Southwest Texas State	3	3	0	0	3	3	0	0	0	0	0	0
Texas	Stephen F. Austin State U.	5	2	0	0	5	2	0	0	0	0	0	0
Texas	Tarleton State U.	26	10	0	0	25	10	0	0	1	0	0	0
Texas	Texas A & M , College Station	13	22	0	0	12	22	0	0	1	0	0	0
Texas	Texas A&M, Commerce	3	0	0	0	3	0	0	0	0	0	0	0
Texas	Texas A & M U.-Kingsville	10	4	1	0	3	3	0	0	6	1	0	0
Texas	Texas Tech U.	29	9	0	0	27	9	0	0	2	0	0	0
Virginia	Virginia Tech	10	9	1	0	9	9	0	0	0	0	0	0
Subtotals		229	114	4	4	211	108	4	0	10	2	0	0

REGION / STATE	INSTITUTION	Newly Qualified		African American		White, Non-Hispanic		Native American		Hispanic		Asian Pacific	
		M	F	M	F	M	F	M	F	M	F	M	F
WESTERN													
Arizona	U. of Arizona	6	6	0	0	6	6	0	0	0	0	0	0
California	Cal. State University-Chico	7	5	0	0	7	5	0	0	0	0	0	0
California	Cal. State U.-Fresno	4	4	0	0	3	4	0	0	1	0	0	0
California	Cal. State U-Pomona	1	0	0	0	0	0	0	0	0	0	1	0
California	Cal. State--San Luis Obispo	15	11	0	0	12	11	0	0	3	0	0	0
California	University of California- Davis	0	6	0	0	0	6	0	0	0	0	0	0
Colorado	Colorado State U.	0	5	0	0	0	5	0	0	0	0	0	0
Idaho	U. of Idaho	8	0	0	0	8	0	0	0	0	0	0	0
Montana	Montana State U.	8	2	0	0	7	2	0	0	1	0	0	0
Nevada	University of Nevada, Reno	0	1	0	0	0	1	0	0	0	0	0	0
New Mexico	New Mexico State University	6	7	0	0	4	6	0	0	2	1	0	0
Oregon	Oregon State U.	4	3	0	0	4	2	0	1	0	0	0	0
Utah	Utah State U.	10	9	0	0	10	9	0	0	0	0	0	0
Washington	Washington State U.	0	1	0	0	0	0	0	1	0	0	0	0
Wyoming	U. Of Wyoming	4	3	0	0	4	3	0	0	0	0	0	0
Subtotals		73	63	0	0	65	60	0	2	7	1	1	0
US TOTALS		**432**	**302**	**9**	**8**	**399**	**288**	**5**	**2**	**18**	**4**	**1**	**0**
		734		**17**		**327**		**7**		**22**		**1**	

Table 11

Agricultural Education Teacher (FTE) Gender and Race/Ethnicity, by Region and State, September 1, 1998

REGION / STATE	Total		African American		White, Non-Hispanic		Native American		Hispanic		Asian/ Pac. Islander	
	M	F	M	F	M	F	M	F	M	F	M	F
CENTRAL												
Illinois	293	53	3	5	289	48	0	0	0	0	1	0
Indiana	202	36	0	2	201	34	0	0	1	0	0	0
Iowa	210	28	0	0	210	28	0	0	0	0	0	0
Kansas	168	7	0	0	168	7	0	0	0	0	0	0
Michigan	*	*	*	*	*	*	*	*	*	*	*	*
Minnesota	200	32	0	0	200	32	0	0	0	0	0	0
Missouri	344	44	0	0	344	44	0	0	0	0	0	0
Nebraska	120	10	0	0	119	10	1	0	0	0	0	0
North Dakota	81	6	0	0	79	6	2	0	0	0	0	0
Ohio	*	*	*	*	*	*	*	*	*	*	*	*
South Dakota	76	10	0	0	76	9	0	1	0	0	0	0
Wisconsin	*	*	*	*	*	*	*	*	*	*	*	*
Subtotals	1694	226	3	7	1686	218	3	1	1	0	1	0
EASTERN												
Connecticut	55	28	1	0	54	28	0	0	0	0	0	0
Delaware	24	15.5	1	0	23	15.5	0	0	0	0	0	0
Maine	19	8	0	0	19	8	0	0	0	0	0	0
Maryland	43	23	3	0	40	23	0	0	0	0	0	0
Massachusetts	64	32	0	0	64	32	0	0	0	0	0	0
New Hampshire	21.5	9	0	0	21.5	9	0	0	0	0	0	0
New Jersey	51	22	1	0	50	22	0	0	0	0	0	0
New York	0	0									0	0

REGION STATE	Total		African American		White, Non-Hispanic		Native American		Hispanic		Asian/ Pac. Islander	
	M	F	M	F	M	F	M	F	M	F	M	F
Pennsylvania	209	51	2	1	206	50	0	0	1	0	0	0
Rhode Island	4.4	1.4	0	0	4.4	1.4	0	0	0	0	0	0
Vermont	26	5	0	0	26	5	0	0	0	0	0	0
West Virginia	89	8	0	0	89	8	0	0	0	0	0	0
Subtotals	605.9	202.9	8	1	596.9	201.9	0	0	1	0	0	0
SOUTHERN												
Alabama	*	*	*	*	*	*	*	*	*	*	*	*
Arkansas	0	3	0	0	0	3	0	0	0	0	0	0
Florida	315	110	15	5	300	105	0	0	0	0	0	0
Georgia	*	*	*	*	*	*	*	*	*	*	*	*
Kentucky	238	36	0	0	238	36	0	0	0	0	0	0
Mississippi	180	10	30	0	150	10	0	0	0	0	0	0
North Carolina	*	*	*	*	*	*	*	*	*	*	*	*
Oklahoma	36	0	0	0	0	0	36	0	0	0	0	0
South Carolina	104	6	25	0	79	6	0	0	0	0	0	0
Texas	1409	181	21	3	1305	171	8	0	75	6	0	1
Virginia	244	59	28	1	216	58	0	0	0	0	0	0
Tennessee	238	10	9	1	229	9	0	0	0	0	0	0
Subtotals	2764	415	128	10	2517	398	44	0	75	6	0	1
WESTERN												
Alaska	6	3	0	0	6	3	0	0	0	0	0	0
Arizona	72	21	0	0	64	20	1	1	7	0	0	0
California	472	188	4	2	429	174	12	2	22	8	5	2
Colorado	90	16	0	0	89	16	0	0	1	0	0	0
Hawaii	0	0	0	0	0	0	0	0	0	0	0	0

REGION STATE	Total		African American		White, Non-Hispanic		Native American		Hispanic		Asian/ Pac. Islander	
	M	F	M	F	M	F	M	F	M	F	M	F
Idaho	90	7	0	0	90	7	0	0	0	0	0	0
Montana	70	11	0	0	69	11	0	0	1	0	0	0
Nevada	21	4	0	0	21	4	0	0	0	0	0	0
New Mexico	74	24	0	0	64	11	1	7	9	6	0	0
Oregon	112	15	1	0	108	15	0	0	2	0	1	0
Utah	80	13	0	0	80	12	0	0	0	0	0	1
Washington	254	62	0	0	248	61	2	1	3	0	1	0
Wyoming	48	4	0	0	48	4	0	0	0	0	0	0
Subtotals	1,389	368	5	2	1,316	338	16	11	45	14	7	3
US TOTALS	6,452.9	1,211.9	144	20	6,115.9	1155.9	63	12	122	20	8	4
		7,664.8		164		7,271.8		75		142		12

* States not reporting their positions by race and sex.

Faculty Numbers and Affiliation

Teacher education ranks in the profession is eroding. A total of 155 ranked faculty members were assigned to positions with at least some agricultural teacher education responsibility in 1998 compared to 222.3 in 1995, a substantial decrease for a 5 year period. Personnel assigned as instructors, graduate teaching assistants, and other faculty were down also. Although it is difficult to identify all teacher education programs that produce certification applicable to agricultural education, those institutions generally recognized in the profession numbered 81. An examination of Tables 8 and 10 reveals 78 institutions that reported having active agricultural teacher education programs for this census. Of those, 3 institutions reported no newly qualified teachers in 1998 and an additional 6 reported only a single completer each, thus leaving 69 institutions producing more than 1 potential teacher each. This study found 84 self-reported "active" agricultural teacher education programs in 1995 with 71 producing more than 1 newly qualified potential teacher. Thus, the number of agricultural teacher education programs reporting themselves as active fell from 84 in 1995 to 78 in 1998, a loss of 7 programs. The number reporting more than a single newly qualified potential teacher fell from 71 to 69, a loss of 3 programs. Agricultural teacher education programs also continued an earlier trend in moving from affiliation with colleges of education to colleges of agriculture. College of agriculture affiliations increased by 5 while education affiliations decreased by 9 during that 4-year period.

Table 12
Agricultural Education Faculty and Colleges of Affiliation [A] in Fall 1998 and 1993

REGION	Rank-ed Faculty	Instruc-tors	Grad Tea Asst	Other Faculty	No. of Pro-grams	Colleg e of Agri-culture	Colleg e of Edu-cation	Other Colleg e
Central	36.6	2.85	11.3	3.75	19	14	3	3
Eastern	19.2	3	2	2	11	7	2	2
Southern	66.2	4	19	5	33	24	7	3
Western	32.8	2.25	9	0	15	14	2	0
1998 US Totals	155	12.1	41.3	10.75	78 [A]	59	14	8
1995 US Totals	222.3	19.3	35.8	22	84 [A]	54	23	11

A These totals include several institutions reporting dual college affiliations. Actual counts of institutions (n=78 in 1998 and n=84 in 1995) are less that the sum of collegiate affiliations indicated here.

Conclusions

Stability

The apparent stability in the total number of positions for teachers of agriculture in the United States over the past three decades masks substantive fluctuations during the period. While 10,378 positions in 1965 were very close to the 10,706 positions reported in 1998, the numbers ranged from a low of 9,998 in 1992 to a high of 12,844 in 1978. Nevertheless, as of 1998, the

number of Agricultural Education teaching positions in the United States has been relatively stable for several years, and is actually slightly higher than when the study began 33 years ago.

> Conclusion: The profession is stable and growing slowly in terms of numbers of teaching positions.

Potential Teachers

The number of newly qualified potential teachers of agricultural education in 1998 increased somewhat over the past few years and, in fact, in 1998 was the highest in a decade at n=748. If that trend continues in the next study, it would represent a significant reversal in the preparation of newly qualified potential teachers of agricultural education. In a major change from the 1995 study, the total of newly qualified potential teachers (n=748) exceeded the net replacements needed (n=574.9) in 1998. In fact, the number of newly qualified potential teachers actually seeking employment as teachers (n=619) exceeded the net number of replacements needed in 1998.

> Conclusion: Given the net need for replacement teachers in 1998, teacher education programs qualified adequate numbers of potential new teachers.

Teacher Shortage

Even with that situation, agricultural education programs nationwide experienced a growing shortfall in the number of fully qualified teachers prepared to accept available teaching positions. All three indicators of that shortfall reached their highest levels of the decade in 1998:

- Teachers needed but not available on September 1 (n=69.5 FTE),
- Teachers with emergency certification (n=175.5 FTE), and
- Departments that likely would not operate because a teacher was not available (n=55).

Those conflicting indicators (excess potential teachers available and seeking employment while positions go unfilled by qualified applicants) indicate a continuing disconnect between available teaching positions and available, qualified potential teachers. Clearly, teachers and positions are not "getting together."

Partially as a result of this study, a national clearinghouse of teacher openings and potential teachers was established on the National FFA web site in 1996 to match available teachers with open positions. The clearinghouse was authorized by the National Council for Agricultural Education, produced with primary leadership from the National Association of Agricultural Educators (NAAE), and funded by the National FFA. State leaders and teacher educators need to make better use of that asset to help match excess teachers in one location to available positions on other locations.

At the same time, we should consider the arguments of those like Brown (1995) and Parmley, Bowen, & Warmbrod (1979), who contended that the shortfall of qualified teachers accepting teaching positions does not constitute a true teacher "shortage." From the perspective of the economist, a shortage exists as an artifact of the imbalance between price offered and price demanded. Whether we call it a teacher shortage or simply refer to the situation as a shortfall in the number of qualified teachers accepting teaching positions, is a matter of semantics. From a practical standpoint, the shortfall of teachers remains with us and has been growing for the past few years, even though it is not at the critical levels of previous decades.

Two conclusions appear warranted:

Conclusion: A de-facto shortage of agricultural education teachers still exists.

Conclusion: Improvements are needed in systems for advising potential new teachers about available teaching positions.

Sources of New Teachers

Two important sources of replacement teachers are previous Agricultural Education graduates and former Agricultural Education teachers. We might speculate that some of those earlier graduates had initially been unable to secure teaching positions in suitable geographic locations initially, and that more desirable positions subsequently became available. Other earlier graduates may well have reconsidered whether they wanted to teach after some experience in non-teaching occupations. Many previous teachers who had left the classroom may well have discovered that "the grass is not always greener on the other side of the fence," and decided to return. Regardless, but for a return to the classroom by members of these two groups, the relatively minor shortfall of replacement teaches for Agricultural Education would have been much more substantial in 1998.

Conclusion: Former teachers returning to the classroom and agricultural education graduates from previous years continue to make up an important source of replacement teachers for the profession.

Placement Rate

In the late 1990s, the placement rate (63.8 per cent) for newly qualified potential teachers increased substantially over the historic norm of just over 50%. Many non-placements result from new graduates who really do not want to teach. The placement rate of those who are newly qualified and who probably wanted to teach was higher still (77.9 per cent).

Conclusion: Agricultural Education remains a field in which the placement rate is relatively high for those who actually want teaching jobs.

Diversity

A small but significant number of our teachers are African American, but only a minuscule number are of Native American, Asian, or Pacific Islander descent. The same is true of females. Considering the proportions of the overall population represented by those various minority groups and by females, Agricultural Education teachers are disproportionately white, non-Hispanic males. Both racial and gender percentages vary somewhat by state and region. The general population patterns of the regions may partially explain the racial/ethnic differences among Agricultural Education teachers. One might speculate that the larger percentages of female teachers in the Eastern and Western regions reflect less conservative attitudes toward gender stereotyping than is prevalent in the Southern and Central regions.

Conclusion: Although progress has been made in this area, efforts are still needed to recruit and prepare women into teaching in agricultural education.

Conclusion: Ethnic minorities are so badly under-represented in agricultural education that major efforts should be made to recruit and prepare minority teachers for the profession.

Program Structure

Clearly, programs labeled as production agriculture no longer represent the predominant mode of delivery in Agricultural Education. Rather, teachers whose programs consist of various combinations of agriculture courses dominate and production agriculture has fallen to fourth place, behind both programs consisting of combinations of various Agricultural Education courses, programs listed as agriscience, and ornamental horticulture programs. On the other hand, for anyone familiar with the teaching patterns in Agricultural Education, it is a reasonable assumption that many of those combination programs are heavily influenced by production agriculture.

Teacher Education

Dykman's (1993) concerns regarding the declining number of teacher education programs in vocational education holds true in Agricultural Education. The number of agricultural teacher education programs reported in this study in 1989 was 88. By 1995, that had fallen to 84. Further, of those 84, 5 institutions reported no newly qualified teachers in 1995 and another 8 institutions reported only one completer each. Thus, the number of "active" agricultural teacher education programs is down again this year. A decline in the number of active programs of Agricultural Teacher Education programs may have even more serious long-term implications for the profession than the decline in the number of newly qualified teachers during the same period.

> Conclusion: Major efforts are needed to expand the capability of teacher education programs to prepare teachers.

Recommendations

A major effort needs to be undertaken by the profession to further increase the number of newly qualified potential teachers of agriculture.

Research is needed to determine why students enroll in and complete teacher education programs, then choose not to seek teaching positions. Is there something that the profession should be doing to increase the proportion of our graduates and other program completers who seek teaching careers? How can the profession be made more attractive to qualified potential teachers of Agricultural Education?

As the number of teacher education programs in Agricultural Education declines, the profession needs to develop a mechanism for supplying qualified teachers for states in which adequate teacher preparation programs are unavailable. Regional or interstate consortia have been used in some places, most notably in the northeastern states where the programs in the University of Vermont, the University of Rhode Island, and the University of Maryland have all been discontinued in the past few years.

Research is needed to describe the kinds of Agricultural Education programs in the various states. What is being taught? Are curriculum reforms that are being reported actually affecting the instruction being delivered by the teachers in their classrooms and laboratories? These questions and many more allied questions have been answered for individual states, but cross-state, regional, even national data are needed.

References

Brown, J. L. (1995). Patterns of supply and demand of teachers in agricultural education since 1965. Unpublished honors thesis, The Pennsylvania State University.

Craig, D. C. (1985). A national study of the supply and demand for teachers of vocational agriculture in 1984. Knoxville: College of Education, The University of Tennessee.

Dykman, A. (1993). Who will teach the teachers? Vocational Education Journal, 68(6), 23-27, 53.

Goodlad, J. I. (1984). A place called school: Prospects for the future. New York: McGraw-Hill Book Company.

Jarvis, C. D. (1921). Agricultural education, Bulletin 1921, No. 40. Washington, DC: Department of the Interior.

Lynch R. L. (1991). A national data base on vocational teacher education. Berkeley: National Center for Research in Vocational Education, University of California.

Lynch, R. L. (1996). In search of vocational and technical teacher education. Journal of Vocational and Technical Education, 13(1), 5-16.

Gerald, D. E. (1999). Projection of education statistics to 2008. Washington, DC: The National Center for Educational Statistics. Available online at http://nces.ed.gov/pubs98/pj2008/

National Research Council. (1988) Understanding agriculture: New directions for education. Washington, DC: National Academy Press.

Nicholas, G. S. (1991). Teacher supply and demand in the United States 1991 report. Evanston, IL: Association for School, College, and University Staffing, Inc.

Olson, S. J. (1993) A new source for teachers. Vocational Education Journal, 68(6), 36-39.

Parmley, J. D., Bowen, B. E., & Warmbrod, J. R. (1979, August). The supply and demand of teachers of agriculture: Can the situation be explained. Paper presented at the annual meeting of the Central Region Conference in Agricultural Education, Manhattan, KS.

Rodman, B. (1987, March 13). Teacher education enrollments seen rising in survey. Education Week, pp 1, 5.

Scanlon, D. C., Yoder, E. P., Hoover, T. S., & Johnson, S. S. (1989). Factors affecting past and prospective enrollments in secondary school agricultural education programs and FFA membership. University Park: Department of Agricultural and Extension Education, The Pennsylvania State University.

Shapiro, B. C. (1993) A boost for teachers? Vocational Education Journal, 68(6), 28-29, 54.

Scheetz, L. P, Slade, K. (1993) Teacher supply and demand in Michigan and the United States 1993. east Lansing: Michigan State University

News Release

FOR IMMEDIATE RELEASE

For further information, contact:

William G. Camp
Agricultural Education Program
288 Litton Reaves Hall
Virginia Tech
Blacksburg, VA 24061-0343
voice (540) 231-8188
fax (540) 231-3824
e-mail wgcamp@vt.edu

#####

The Agricultural Education classrooms in America are faced with a shortage of new teachers. An estimated 889 new agriculture teachers were needed in the nations' schools in fall of 1998. But, there were only about 619 new graduates looking for teaching positions. Three hundred schools were unable to hire fully qualified teachers of Agricultural Education by the beginning of school in September, 1998.

Agricultural Education teachers are probably best known as FFA advisors, but their main job is preparing students for entry into jobs in the industry of agriculture and agribusiness. Most people study to become agriculture teachers by majoring in Agricultural Education at their state agriculture colleges or land-grant universities.

#####

Fact Sheet

A NATIONAL STUDY OF THE SUPPLY AND DEMAND FOR TEACHERS OF AGRICULTURAL EDUCATION IN 1998

Total number of agriculture teaching positions in US	10,706
Number of openings for 1995	889
Net number of new teachers needed	575
Number of newly qualified potential teachers	748
Estimated number of newly qualified teachers seeking teaching positions	619
Teachers needed but not available September 1, 1998	70
Teachers with emergency certificates	175
Departments expected to close for 1998-99 due to lack of qualified teacher	55
Types of teaching positions	
High school only	8,089
Middle/junior high school only	432
Adult teacher only	199
Other schools	1,986
Number of teachers with both in-school and adult or Young Farmer programs	1,426
Subjects taught	
Agriscience	994
Ornamental Horticulture	1,079
Production Agriculture	1,379
Specialty programs, such as Natural Resources Management or Ag Mech.	4,106
Combinations of agriculture programs	3,108
Combinations of agriculture and some other subject	40
Texas had the largest number of teachers	1,590
Alaska had the smallest number of teachers	8

#####

For further information, contact:
William G. Camp
Agricultural Education Program
288 Litton Reaves Hall
Virginia Tech
Blacksburg, VA 24061-0343
voice (540) 231-8188
fax (540) 231-3824
e-mail wgcamp@.vt.edu